A1

to cols. 9-3452 of the original patent. A microfiche copy will be provided subsequently as a substitute for the hard copy, and this note will be deleted from the application.)

Column 1, lines 33-56, please amend the paragraph as indicated below:

A2

In known systems, not necessarily in the prior art, a user wears a special helmet that contains two small television screens, one for each eye, so that the image appears to be three dimensional. This effectively immerses the user in a simulated scene. A sensor mounted on the helmet keeps track of the position and orientation of the [users] user's head. As the user's head turns, the computerized scene shifts accordingly. To interact with objects in the simulated world, the user wears an instrumented glove having sensors that detect how the hand is bending. A separate sensor, similar to the one on the helmet, determines the hand's position in space. A computer-drawn image of a hand appears in the computerized scene, allowing the user to guide the hand to objects in the simulation. The virtual hand emulates the movements of the real hand, so the virtual hand may be used to grasp and pick up virtual objects and manipulate them according to gestures of the real hand. An example of a system wherein the gestures of a part of the body of the physical user is used to create a cursor which emulates the part of the body for manipulating virtual objects is disclosed in copending U.S. patent application Ser. No. 317,107, filed Feb. 28, 1989, U.S. Pat .No. 4,988,981, issued Jan. 29, 1991, entitled, "Computer Data Entry Manipulation Apparatus and Method," incorporated herein by reference.

Column 4, lines 18-44, please amend the paragraph as indicated below:

A3

FIG. 2 shows an example of a simple data flow network for coupling data from the head of a person in the real world to their virtual head. Complex interactions such as hit testing, grabbing, and kinematics are implemented in a similar way. The data flow network shown in FIG. 2 may be displayed on a computer screen and any parameter edited while the virtual world is being simulated. Changes made are immediately incorporated into the dynamics of the virtual world. Thus, the [participants are] participant is given immediate feedback about the world interactions he or she is developing. The preparation of a data flow network comprises two different phases: (1) creating a point hierarchy for each object to be displayed in the virtual world and (2) interconnecting

A3

input units, function units and output units to control the flow/transformation of data. Each function unit outputs a position value (x, y or z) or orientation value (yaw, pitch or roll) for one of the points defined in the point hierarchy. As shown in FIG. 2, the top and bottom input units are connected to first and second function units to produce first and second position/orientation values represented by first and second output units ("x-Head" and "R-minutehan"). The middle two inputs of FIG. 2 are connected to third and fourth function units, the outputs of which are combined with the output from a fifth function unit, a constant value function unit, to create a third position/orientation value represented by a third output unit (R-hourhand), which is the output of a sixth function unit.

Column 8, lines 7-21, please amend the paragraph as indicated below:

A4

Linking technology for remotely located participants include Ethernet, [phoneline] phone line, broadband (ISDN), and satellite broadcast, among others. Data compression algorithms may be used for achieving communications over low bandwidth media. If broadband systems are used, a central processor may process all image data and send the actual image frames to each participant. Prerecorded or simulated behavior may be superimposed on the model together with the real time behavior. The input data also may come from stored data bases or be [alogorithimically] algorithmically derived. For example, a virtual environment could be created with various laws of physics such as gravitational and inertial forces so that virtual objects move faster or slower or deform in response to a stimulus. Such a virtual environment could be used to teach a participant how to juggle, for example.